An Inaugural Essay on Hepatitis or Inflammation of the Liver

by

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Hepatitis, or Inflammation of the Liver.

This disease is located in class Pyrexia, order Phlegmasia, according to Cullen.

Hepatitis is of two kinds, the one acute, which exhibits the essential character of genuine inflammation; the other chronic, which exhibits symptoms of less violence as to their inflammatory tendency.

Acute Hepatitis.

Symptoms.— It commences in general with a shivering or rigor, which is succeeded by febrile heat with pain either acute or dull, in the right hypochondriac region, shooting more particularly in the direction of the back; and extending to the right shoulder blade; and is accompanied with a cough, oppression in respiration and difficulty of lying, except on the right side; yet instances now and then occur where the patient is unable to lie on either side; pressure on the region of the liver, where there is usually some tension; induces considerable increase of pain and tendency to cough, and the cough attending this disease is more generally dry than moist. The alimentary canal becomes early implicated in this disease, as is indicated by the nausea,

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sickness, hiccup and frequently with a vomiting of apparently bilious matter; the bowels being for the most part irregular and generally slow in their action; the excrements discharged are of an ash or white colour, indicating the want of bile; the urine of a deep saffron colour, small in quantity, and is often tinged with bile; there are loss of appetite; great watchfulness and occasional delirium; extreme thirst, costiveness with a strong, hard, and frequent pulse, from ninety to one hundred and twenty in a minute, and sometimes intermitting; the skin is hot and dry at the same time, and the tongue covered with a white, and sometimes a yellowish crust, extending to the mouth and fauces; dejection of spirits, and when the disease has continued for some days it is attended generally, with a jaundice colour of the skin; by reason of the pressure of the inflamed liver upon the pori biliarii.

This disease is occasionally complicated with anomalous symptoms; for the liver has not unfrequently been found after death to be indurated or otherwise injured, without any marked indication of disease during the life of the patient, excepting dyspepsia or simple indigestion. This disease has been known, also, to spend itself with very great violence on the head, sometimes on the penis and lower extremeties.

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Men from their depraved habits, are more subject to hepatitis than women; but children, perhaps, are the most frequent subjects of its attack in miasmatic countries.

It may be observed here, that in inflammation of the liver as well as in inflammation of every other part of the body, the symptoms are more or less violent, according to the degree of sensibility in the part affected. If the inflammation attacks the convex anterior surface of the liver, so that the peritoneum becomes affected, the pain is much increased by pressure, and some degree of tumor may be observed. If that part of the organ be diseased, which is more immediately contiguous to the diaphragm it gives rise to painful and difficult respiration, acute shooting pains in the thorax. These symptoms from the resemblance they bear to those of the inflammatory affections of the chest, are liable to be confounded with them; but are to be readily distinguished by an attention to the history and progress of the complaint, and other diagnostics which I will, presently, more particularly mention. In some cases of hepatitis, the stomach is so extremely irritable, that violent retching and vomiting occur; symptoms influenced, perhaps, by the inflammation being in the vicinity of that organ.

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Causes — Besides the most usual exciting causes of inflammation situated in other parts of the body, inflammation of the liver is occasioned by intense summer heat; hence it is of most frequent occurrence in tropical climates; by mental emotions as envy and jealousy, by blows on the head, by violent exercise, especially in the sun, by long continued intermittent and remittent fevers, by miasmata, by high living, by the intemperate use of vinous and spirituous liquors, more particularly the latter, by the sudden exposure to cold when the body has been sometime in a state of perspiration, by biliary concretions which sometimes form in the gall ducts preventing the free passage of the bile to its destination, by the suppression of an hæmorrhoidal discharge and by some of the derangements of the alimentary canal.

Diagnosis — The diseases which are liable to be mistaken for hepatitis, are the inflammatory affections of the chest, inflammation of the stomach, spasm of the gall ducts, and the rheumatic affections of the muscles in the neighbouring parts.

Hepatitis is more liable to be confounded with the inflammatory affections of the chest, when it is situated in the membranes covering the upper convex surface of the liver, or the ligaments that connect it

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to the diaphragm, or even in the upper part of its parenchymatous texture; by reason of the enlargement which the inflammation may induce in it, so as to extend in such a direction, as to occasion it to make pressure on the diaphragm, sufficient to diminish the cavity of the chest, so that there is a considerable irritation and pain felt, upon the motion of the diaphragm in the act of respiration. Under such circumstances a troublesome cough comes on, so that the disease assumes in some measure the character of thoracic inflammation. But we may readily distinguish them, by the pain, in the former extending to the shoulder, the sallowness of the countenance, the cough being unaccompanied by expectoration, and there being less dyspnoea in hepatitis. Inflammation of the liver is distinguished from that of the stomach, by its not being accompanied with that extreme sense of heat and pain, with which that organ is affected, especially after taking anything into it, and without the immediate rejection of them; nor is the debility of the system so great in the inflammation of the liver as in that of the stomach.

Hepatitis may be distinguished from spasm of the gall ducts, by there being no nausea, the pain being permanent, the pulse being one hundred and upwards in a minute, and the patient always

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preferring to keep the body in a strait and quiescent posture, where as the greatest ease, when there is spasm in the gall ducts is obtained by bending the body forwards on the knees.

And in the case of muscular pain there is little or no fever, the pain more diffused; frequently removing from one part of the abdomen to the other; and becomes more diffused by varying the posture of the body, it generally alternates with rheumatic pain in one or more joints of the body.

Terminations. Hepatitis like inflammation situated in other parts of the body, may terminate by resolution, suppuration, scirrhus, or gangrene; but it most frequently terminates, (from being badly managed,) in chronic hepatitis.

The tendency of hepatitis to resolution is known by the general mildness of the symptoms and their yielding to the proper remedies, particularly by there being little cough, dyspnœa, vomiting, oppression or debility. When this disease terminates spontaneously and favourably, there is generally some preternatural evacuation that takes place, as hæmorrhagy, from the nose, or hæmorrhoids, particularly; sometimes by diarrhœa; erysipelatous inflammation, perspiration; or a copious

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discharge of high coloured urine, depositing a red or whitish sediment. In some cases there has been such a preternatural increase of the bronchial secretion, accompanying the resolution of this disease, as to occasion suffocation.

The symptoms indicating the formation of matter in the liver are not always very obvious, however the most striking of them are a diminution of pain, a sense of pulsation and weight in the right hypochondrium, especially when lying on the left side, frequent returning rigors and an accession of fever. When hepatitis terminates in suppuration, it may discharge itself in several ways, by the stomach, or some other part of the alimentary canal, into the cavity of the abdomen, the cavity of the chest or the substance of the lungs itself, the bladder, the pericardium, through the parietes of the abdomen, and the matter sometimes passes through the biliary ducts into the duodenum; these two last modes are, perhaps the most favourable manner, in which the matter can be discharged.

When hepatitis does not altogether yield to the treatment advised, but being in some measure subdued by it, we may then expect it to terminate in scirrhus, which is known

by the enlarged, indurated liver, that is found upon examinations, and pointed out by a dull pain situated in the right hypochondriac region, extending to the shoulder; also by an uneasy sensation in respiration; occasioned by the pressure of the diseased liver upon the diaphragm, and also by digestion in general not going on regular, from the incapacity of the scirrhous liver to secrete a sufficient quantity of bile.

It is sometimes the case, where the pain and inflammation have subsided very suddenly, and then succeeded by a low fluttering pulse, cold extremities, deliquium, and death: so, that there have been just reasons to suspect that this organ, may on some occasions, though much less frequently than others, become gangrenous.

Diseased Appearances of the Liver.

On the dissection of those who die of hepatitis, it will be found that the liver has formed adhesions to the neighbouring parts, or that the membranes and liver are more or less inflamed or altered in their appearances; in a state of suppuration, congestion, scirrhus, or as has sometimes been found gangrenous.

Treatment. As the symptoms of this disease vary as regards the climate in which it occurs, so the treatment must accordingly vary.

In the treatment of this disease, as it usually presents itself, we commence with copious venesection; from twenty to thirty ounces of blood is to be taken at once, and the repetition of the operation within twenty four hours, must be determined on by the degree of pain and fever with which the patient is affected; at the same time applying cups or leeches to the region of the liver, immediately to be followed by the application of a large blister over the part affected. In the meantime however, we should accompany the bloodletting by purging freely with calomel, to be followed within eight or ten hours by a dose of epsom salts, magnesia or some other laxative, or an emollient injection, which contribute to mitigate tormina and tenesmus. After the alimentary canal has been once freely evacuated, it should be kept in a soluble state by the following prescription;

℞ Calomel grs. 6
Tartar Emetic gr. 1
Opium gr. ½. M. f.t. bolus, to be taken every six hours;

after which a laxative should occasionally be administered. The tartar emetic and opium are given for the purpose of relaxing the hot and dry skin, which is generally attendant on this disease, and to guard the bowels from irritation.

These remedies connected with a rigid enforcement of the antiphlogistic regimen, constitute our main reliance in the commencement of hepatitis; and if the inflammation should readily yield to these, nothing more directly for its management will be required; but for the purpose of more perfectly eradicating the disease, it is advisable for the patient to undergo a gentle mercurial ptyalism, which is to be continued for sometime with a well regulated diet.

But when the disease shall have continued for four or five days without being at all subdued in its violence by the preceding remedies, we may then expect suppuration of the liver shortly to take place, but we must prevent it by producing a ptyalism as quick as possible, and in order to fulfil our intention we must make use of mercury to its greatest extent, both internally and externally; for unfortunately at this critical period there seems to exist a peculiarity, such an insusceptibility in the system to a mercurial ptyalism at the time suppuration is about to take place, or has taken place, that we are

by the administration of the best discriminating doses internally and by the most assiduous inunctions externally, occasionally failed in producing the desired mercurial impression.

Here the lepid bath by determining to the surface will sometimes so far restore the balance of excitability and circulation, as to promote the action of mercury both from the internal and external surfaces of the body. But great care is to be taken to avoid a subsequent chill and a consequent recoil of the circulation which will be sure to aggravate all the symptoms, instead of relieving them. The action of mercury on the system, is accelerated in some measure by causing the patient to swallow, every night at bed time, a considerable quantity of warm diluting drinks, as thin water gruel &c.

The mercury may also be assisted in producing its effects by applying the nitro muriatic acid bath of Mr. Scott, or the administration of the nitro muriatic acid internally, in the quantity of one or two drachms a day to be taken in divided doses.

When all our endeavours to subdue the inflammation fails, and an abscess is about forming in the liver, which is marked by the pulse becoming softer, frequent shiverings, abatement of pain, and a sensation of weight about the region of the liver, we must

endeavour as much as possible, to promote the suppuration and its discharge through the parieties of the abdomen; for this purpose the usual application of emollient poultices and fomentations, must be immediately made, and duly persisted in, untill the contents the abscess can be discharged by an incision through the external teguments by some skilful operator.

The opening should be made in the most depending part of the tumor, where a fluctuation is sometimes perceived. Having with a scalpel cut through the external teguments, and reached the abscess, it may be pierced with a trocar and the matter gradually evacuated. If the liver has formed such adhesions to the peritoneum as to prevent the pus from falling into the cavity of the abdomen the life of the patient may be preserved. The Peruvian bark in doses of half a drachm in powder, should be given four or five times a day during the formation of the abscess; and after it is opened, in order to support the strength of the patient, and to guard against the effects of purulent matter. The patient is to be supported with light nourishing food and cooling diluting drinks carefully avoiding all heating substances, as in other inflammations

The matter of abscess of the liver may discharge itself in the

various manners before mentioned; which varies according to the adhesions that the liver forms, and the particular part in which the suppuration takes place; these cases are to be treated in the same general manner as the preceding one; but they are much more apt to terminate fatally.

This is the treatment of acute hepatitis as it occurs in the more temperate climates; but it will not answer in the tropical climates for it there runs into suppuration much quicker from the more violent action of the exciting causes, therefore the treatment consist in less depletion by the lancet, but a more active and early use of mercury for the purpose of completely putting the system under its influence.

Chronic Hepatitis

This form of the disease, as has been before observed, is the most frequent manner, in which acute hepatitis terminates from being badly managed; but it is occasionally induced by many of the same causes that excite the acute kind, but they are milder in their effects, and it may then act as the consequence of that disease; it is attended by most of the symptoms that characterize acute hepatitis, however they are less violent in their action, being accompanied with more hardness and swelling, which are the most prominent diagnostics of the two species of the disease. The liver may exist in several states while exhibiting the symptoms of chronic hepatitis; as in a moderate state of inflammation in the membranes or substance of the liver, perhaps this is the most frequent manner in which it does exist while exhibiting these symptoms; coats converted into cartilage; common tubercles; very soft in its substance; very hard in its substance; worms in the liver; and the liver has been found destroyed of every thing except its bloodvessels. We have no particular diagnostic by which we are enabled to distinguish these different states of the liver when they exist, therefore we are unable to point out a treatment for each one, but in the generality of cases the following will succeed best.

Treatment. It is sometimes required in the treatment of this disease, that we should make use of venesection, but in a very moderate degree and what is taken should be taken in a very moderate ~~[illegible]~~ quantity at a time. We should purge from the commencement of this disease very copiously with calomel, to be given every night or two, to be followed next morning by a dose of epsom salt or magnesia.

Among the remedies in this complaint, mercury is the one on which we are principally to rely, given slowly and in small doses, so as to keep up a brassy taste in the mouth for some time, for the purpose of effectually promoting the secretion of bile, and exciting the extreme vessels on the surface of the body; to increase the latter effect however, it has been found useful to combine with it a small proportion of opium and tartar emetic, (as is recommended in the treatment of acute hepatitis) at the same time to guard the bowels from irritation.

The next most salutary process that is to be attended to, is to keep up a regular peristaltic motion of the bowels, and excite the mouths of the excretory ducts of the liver which will tend to eliminate the vicid and depraved secretion from that organ itself.

There seems no medicines better calculated for that purpose than the following prescription;

℞. Compound Extract Colocynth, ℥j
Calomel, ʒj
Tartar Emetic, grs. iv
Oil Carui, gtt. vj
Common Syrup, q. s. M. ft. Pills. No. 30. One or two of the above pills, taken occasionally at bed time, will move the bowels gently next morning, carry off disease, and promote healthy secretion of bile; and will be found to obviate in a wonderful manner that mental despondency and long train of nervous symptoms so constantly attendant on this complaint.

Our attention at the same time is to be directed to the cutaneous discharge: This, is never to be forced by heating or stimulating, but an insensible habitus promoted; by the most gentle means, such as moderate exercise, particularly by gestation; by a sea voyage; swimming; with flannel next the skin; particularly in changable climates. The assiduous and daily application of the flesh brush over the hypochondriac region, will be found to excite the healthy action of the biliary organs in no mean degree.

The tepid bath, using the utmost caution in avoiding a subsequent chill, will evidently be serviceable. Blisters or the more permanent drain of a seton in the side, where there is much local pain or uneasiness, may be had recourse to with advantage.

Another remedy which has acquired great reputation in the treatment of chronic hepatitis is the nitric acid. It may be given in divided doses to the amount of from one to three drachms in the course of twenty four hours. A pleasant formula is, to make it into a julep with gum Arabic and loaf sugar.

Scirrhous affections of the liver may be treated in the same manner as chronic hepatitis.

The diet best adapted for persons labouring under hepatitis, is such as is nutritive and easy of digestion; and may be gradually improved until health is perfectly restored.

He who labours under diseased liver, and hopes to protract his existence with any kind of comfort to himself, must abandon what are called the pleasures of the table, but which are in reality the bane of human health; and observe a rigid temperance with respect to diet.

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With respect to drinks, simple water is best; no spirituous liquors whatever should be drank.

Late hours and night air, are to be studiously avoided.

It is advisable to those who labour under affections of the liver, and reside in tropical climates, for them to change their residence, for a more temperate one; for, if they remain there, they are continually exposed to one of the most frequent exciting causes of those diseases